



10 light years from Earth, in the closest known planetary system to our own, an artist's conception shows an asteroid belt circling its sun, Epsilon Eridani. Closer to home, Sandia researchers are part of an international team that for the first time has identified an asteroid in near-Earth space and accurately predicted its impact location on the planet (see story below).  
Image courtesy of NASA/JPL-Caltech

# We saw it coming

**Asteroid monitored from outer space to ground impact**

By Neal Singer

Reports by scientists of meteorites striking Earth generally resemble police reports of too many muggings — the offenders came out of nowhere and then disappeared into the crowd, making it difficult to get more than very basic facts.

Now for the first time, an international research team identified an asteroid in space before it entered Earth's atmosphere, enabling computers to determine its area of origin in the solar system as well as predict the arrival time and location on Earth of its shattered surviving parts.

"I would say that this work demonstrates, for the first time, the ability of astronomers to discover and predict the impact of a space object," says Mark Boslough (1433), a member of the research team.

Perhaps more importantly, the event tested the ability of society to respond very quickly to a predicted impact, says Mark. "In this case, it was never a threat, so the response was scientific. Had it been deemed a threat — a larger asteroid that would explode over a populated area — an alert could have been issued in time that could potentially save lives by evacuating the danger zone or instructing people to take cover."

(Continued on page 4)

## Dragons and Damsels



Sometimes art inspires science, but Gary Froehlich's work in the science of optics inspired him to learn more about the art of photography. Now, Gary's photographs are on display at New Mexico Tech's Macey Center in an exhibit called "Dragons and Damsels of the Bosque del Apache National Wildlife Refuge." See story and photos on page 8.

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# Sandia LabNews

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# This year's performance review to include key changes

**Greater consistency, fairness among goals**

By John German

You will notice a handful of changes later this year when your manager discusses your annual performance review and your compensation increase with you.

"The goal of any compensation system is to provide an equitable and consistent method of making salary decisions across the organization," says John Slipke, VP for HR & Communications Div. 3000. "These changes, along with management's commitment to consistent use of these processes, will help ensure fairness across the Labs."

The changes also align with the new job structure

***"These changes, along with management's commitment to consistent use of these processes, will help ensure fairness across the Labs."***

HR & Communications Div. 3000 VP John Slipke

being developed by a Labs-wide team of division reps, says Compensation manager Melissa Creange (3002). The new job structure, which will replace the current  
(Continued on page 3)

# Job restructure process for nonexempt, nonrepresented employees begins

**ASA and TNG job descriptions now being reviewed**

By John German

Approximately 1,500 nonexempt, nonrepresented employees will be included in Sandia's new compensation system sooner than originally planned.

Administrative staff associates (ASAs) and technologists (TNGs) are being folded into the job restructure project that is already under way for exempt staff (MLS and MLS management, and MTS and MTS management). The project will create a more modern market-based job structure for Sandia, to replace the current Integrated Job Structure (IJS), put in place more than a decade ago. The new structure is scheduled for implementation in April 2010.

The Job Restructure Implementation Team — a

team of senior managers and directors representing all Sandia divisions — has begun working with division and center management to review existing job descriptions to create a comprehensive, accurate set of occupation descriptions for all ASA and TNG positions.

These job descriptions will allow Sandia's compensation consultants to gather salary information for comparable jobs at organizations similar to Sandia, such as other national laboratories and high-tech companies, the first step in developing market-based salary bands for the new job structure. For more about the project see [www-irn.sandia.gov/Change\\_Sandia/change\\_pages/job\\_restructure.html](http://www-irn.sandia.gov/Change_Sandia/change_pages/job_restructure.html).

(Continued on page 3)



# That’s that

With Lab News editor and That’s That columnist Bill Murphy on vacation, Lab News writer Iris Aboytes has stepped in to fill the breach. Here’s her column:

**March Madness:** Basketball’s best college teams have gotten together to crown a national champion. The road to the Final Four has many of us glued to our television sets. In the end some of the top basketball players will sign basketball contracts that will bring them financial independence. For many of them, becoming proficient in basketball will bring them great bonuses. Of course, bonuses will not be as great as those received by AIG’s management.

**Communications tools:** I attended a “How to Become a Better Communicator” class recently. I was familiar with some of the bits and pieces, but still found some of them interesting. Maybe you will, too.

- Communication – Getting what you want.
- Be and act like who you are – Your consistency makes others comfortable.
- Avoid confusing signals about yourself – No guess work; communicate what you want and need.
- Building trust – Build rapport with others; be wise.
- Power and influence – Understand and try to provide what others want out of your interaction in order to get what you want. Power is also the ability to set terms of communication.
- Listen – With *all* your senses.
- Charisma – Positive energy and magnetism you send out to people.
- Assertive – Say what you mean. Mean what you say, without saying it in a mean way.
- Create enthusiasm – Cultivate it.
- Don’t talk too much – Remember, we have one mouth, but two ears.
- Smile – A smile speaks even when you can’t figure out what to say.

Perhaps many of you have attended other communications classes that have offered different information. Like my mom used to say, “*Cada maestro tiene su librito.*” (Every teacher teaches his own book.)

**Spring fever:** Spring has sprung and many of us have sprung with it. I have spring fever. I look out the window and yearn for the outside. My daydreaming takes me to calm, fertile fields where I am in the midst of beautiful wildflowers. The melting snow brings ripples to cool mountain streams. Squirrels begin to emerge as the warmth of the sun urges their return.

The phone rings and reality sits in. Best I go for a walk during lunch? Has your spring sprung or have allergies become your ruler?

**One last thing:** During the communications session I mentioned above, a discussion led to thinking of the person you would most like to emulate. Think about it – spouse, parents, coworkers, movie star, athlete. I thought and thought before I finally came up with the answer: my grandchildren! They have no preconceived notions, such innocence, such energy, and they rationalize everything with such creative zest.

My 3-year-old grandson was in the hospital the other day. He and I went over and over again how the sun says “morning” and the moon says “goodnight.” It became a game. Then he had second thoughts. I asked him what the sun said and he answered “hello.” I asked him if he was sure and he said “yes.” Then I asked him what the moon said and he answered “goodbye.”

Who would you most like to emulate?

– Iris Aboytes, (505-844-2282, MS0165, ioaboyt@sandia.gov)

# Jennifer Franklin becomes Sandia’s first DOE Defense Programs Employee of the Quarter winner

By Iris Aboytes

Jennifer Franklin (2138) has been named DOE’s Defense Programs Employees of the Quarter winner for Sandia National Laboratories. Her award is displayed in the Forrestal building in Washington, D.C., just outside the NA-10 suite of offices.

Jennifer is a systems engineer in the W76-0 & W88 Systems Engineering department who mitigated risk for Sandia and NNSA. “She did an outstanding job in managing a fire-down test from initial planning through documenting lessons learned,” says her manager Dennis Helmich (2138). “I’m very happy to see Jennifer receive this well-deserved recognition. She is an outstanding system engineer and represents the best Sandia has to offer in terms of dedication, thoroughness, and teamwork.”

Her citation states: “*When a neutron generator rupture occurred during a W88 JTA2R fire-down test a small amount of tritium was released principally in solid form bound to the tube’s target material. Jennifer’s planning incorporated a Hold Point for post-test rad contamination swipes and a Void Point in the procedure in the even significant contamination was detected. In addition, the potential for tritium release was incorporated in a test-specific Primary Hazard Screening (PHS) months prior to the test. Jennifer’s actions resulted in the avoidance of a significant event through her careful and purposeful preplanning.*”

The NNSA awards program was established this year. It is designed to honor outstanding employees in the federal government and in their management and operations organizations. The awards are intended to recognize the valuable work that best performers are producing across the national security enterprise.

“I’m honored to be recognized for the work I’ve done, but I had the help of several Sandians in the planning and execution of the project,” says Jennifer. “I feel very lucky to be able to work with and learn from my Sandia coworkers.

“I really enjoy working at Sandia. I enjoy the people, variety of work, and the fact that I am constantly learning.”



JENNIFER FRANKLIN

# Sandia LabNews

Sandia National Laboratories

<http://www.sandia.gov/LabNews>

Albuquerque, New Mexico 87185-0165  
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Carlsbad, New Mexico • Washington, D.C.

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Bill Murphy, Editor ..... 505/845-0845  
Chris Burroughs, Writer ..... 505/844-0948  
Randy Montoya, Photographer ..... 505/844-5605  
Mike Janes, California site contact ..... 925/294-2447  
Michael Lanigan, Production ..... 505/844-2297

Contributors: John German (844-5199), Neal Singer (845-7078),  
Stephanie Holinka (284-9227), Iris Aboytes (844-2282), Michael  
Padilla (284-5325), Julie Hall (284-7761), Patti Koning  
(925-294-4911), Michelle Fleming (Ads, Milepost photos, 844-4902),  
Dept. 3651 Manager: Chris Miller (844-0587)  
Lab News fax .....505/844-0645  
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## Get your Family Day 2009 registration form completed And learn more about the event

With the first Albuquerque-based Family Day open house in a decade fast-approaching you’ll probably want to visit the event website real soon at <http://familyday.sandia.gov>.

While at the site you can download and complete a Guest Registration Form right now, if you wish. It’s an all-important document. You’ll need at least two copies on the day of Family Day 2009, Saturday, May 16, 9 a.m.-3 p.m., to get your guests on base and then badged for entry into tech areas.

The site, which will be updated periodically, contains information about procedures that must be followed, while offering a variety of important messages about safety and security.

Also, volunteers — true volunteers — are needed for the event, so the site provides an opportunity to sign up for that gratis duty. A Frequently Asked Questions page will likely address most of what you want or need to know.

But, if necessary, Rod Geer, Family Day Coordinator, can be reached at [wrg eer@sandia.gov](mailto:wrg eer@sandia.gov).





# Randy Wong named 2008 commercial photographer of the year



A WINNING EYE — Photographer Randy Wong poses with his award-winning portraits of Bert Brown, Joanne Volponi, and Deanna Curtis. Randy has been named the 2008 commercial photographer of the year by the Professional Photographers of the Greater Bay Area. Says Randy: “I love lab shots. I literally can’t sleep the night before sometimes because I’m thinking about the shot.”

**Sandia**  
**CaliforniaNews**

Congratulations are in order for Randy Wong (8528), who was named the 2008 commercial photographer of the year by the Professional Photographers of the Greater Bay Area (PPGBA). At the organization’s awards banquet on Feb. 9, Randy swept the commercial category with photographs of Bert Brown (8224), Deanna Curtis (8621), and Joanne Volponi (8625) — all working in laboratory settings. What’s more impressive is that this was Randy’s first year to enter PPGBA competitions. Randy began his career as a wedding photographer 29 years ago. He’s shot more than 800 weddings, but that business has dropped off markedly with the economy and advent of the digital camera. When he began working for Sandia in 1996, as a supplemental photographer, he had limited experience shooting in laboratory settings. “At the time, I was doing wedding, portrait, and commercial photography,” says Randy. “I’d done a few lab shots — circuit boards for computer companies, for

example — but nothing to the extent here.” It wound up being a great opportunity. “I love lab shots,” says Randy. “I literally can’t sleep the night before sometimes because I’m thinking about the shot.” One attraction of shooting in labs is the technical challenge. The subject matter is sometimes difficult to depict photographically and labs themselves are often poorly lit and cramped. To get around the latter issue, Randy often acquires or modifies his lighting equipment to create a unique look for the particular situation. As you might expect, he can’t name his favorite picture. “It’s always the one I’ve just finished working on,” says Randy. To see more of Randy’s work, visit <http://rwppcommercial.com> for commercial work and [www.randywongphotography.com](http://www.randywongphotography.com) for weddings, portraits, and events. For more on PPGBA, visit [www.ppgba.org](http://www.ppgba.org). — Patti Koning

## Performance review

*(Continued from page 1)*

Integrated Job Structure (IJS), is expected to be completed by spring 2010, in time for next year’s performance review cycle.

### Key changes

- Key changes for this year’s performance review include:
- An employee who is new to a ladder or level (via promotion, for example) will be rated against his or her new peer group.
  - An employee who is new to an organization (via internal transfer) will be rated based on input from both current and previous organizations.
  - New employees (defined as those who have been at Sandia less than six months) will receive an NR (Not Rated) designator.
  - Beginning Feb. 17, 2009, employees who intend to retire no longer have the option to request full nonbase compensation. Employees will now receive both a base and nonbase compensation distribution.
  - Compensation notices provided to employees during comp review will no longer include an employee’s total cash compensation (TCC) position relative to other Sandians. Instead, they will indicate an employee’s TCC position (see “What is

### What is your TCC?

Sandia defines an employee’s total cash compensation, or TCC, as current base salary plus any nonbase award given during the annual compensation review. Individual performance awards (IPAs) or other monetary rewards given during the year are not part of an individual’s TCC for compensation purposes. In other words, if after your compensation review your new base salary is \$47,000 and your nonbase award for the year is \$3,000, your TCC is \$50,000. Your TCC, which appears on the compensation notice your manager gives you during your annual compensation review, is important because it is the apples-to-apples number used to compare your salary against the market-based salary bands Sandia uses to ensure it is paying its employees competitively. This is the best indicator of Sandia’s ability to attract and retain skilled employees, says HR VP John Slipke. (Note: The TCC listed on your compensation notice may vary slightly from the TCC for you listed on the HR Self Service page because the latter includes all IRS-reportable income you receive during the year, including IPAs.)

your TCC,” below) compared to external market survey data for similar occupations. Market-based salary bands, the core of the new job structure now under development, provide a more relevant perspective on an employee’s salary level for retention purposes, Melissa says. Managers still will have access to the internal dot charts. For consistency across the Labs, divisions are not permitted to specify compensation review processes that are in addition to, or that differ from, these corporate processes, she says. For more information, see the Compensation homepage at [www-irn.sandia.gov/hr/compensation](http://www-irn.sandia.gov/hr/compensation). (Note: The TCC listed on your compensation notice may vary slightly from the TCC for you listed on the HR Self-Service page because the latter includes all IRS-reportable income you receive during the year, including IPAs.)

## Job restructure

*(Continued from page 1)*

Of the employees in the nonexempt nonrepresented group, only ASAs and TNGs will be included in the process. Because OMAs and SMAs are not part of the IJS, they will not be included in the development of the new job structure. Represented employee job structures are bargained in their respective labor agreements.

### Extra time for planning

As originally planned, the new job structure for the exempt population was to take effect this summer. Review of ASA and TNG positions was to follow. However, a recent decision to extend the overall job restructure schedule by nearly a year (*Lab News*, Feb. 16, 2009) allows time to include the nonexempt, non-represented employees in the initial implementation, says Compensation manager Melissa Creange (3002). The schedule extension will help the team ensure that design tradeoffs can be resolved so the final structure works well for everyone who will become part of it. In addition, implementing the new job structure in concert with a major HR software upgrade will conserve time and money. For ASAs and TNGs, the schedule change means they will now become part of the new job structure at the same time as nearly 5,600 exempt Sandia employees. “Implementing the new job structure for the majority of us simultaneously and in parallel with the PeopleSoft upgrade is the simplest, most efficient way to do this,” says John Slipke, VP for Human Resources & Communications Div. 3000. “As we compete for skilled people and for mission work, an updated, flexible, and more market-based job structure is a necessity,” he adds. “It is one important way for the Labs to remain both technically capable and attractive to customers.”

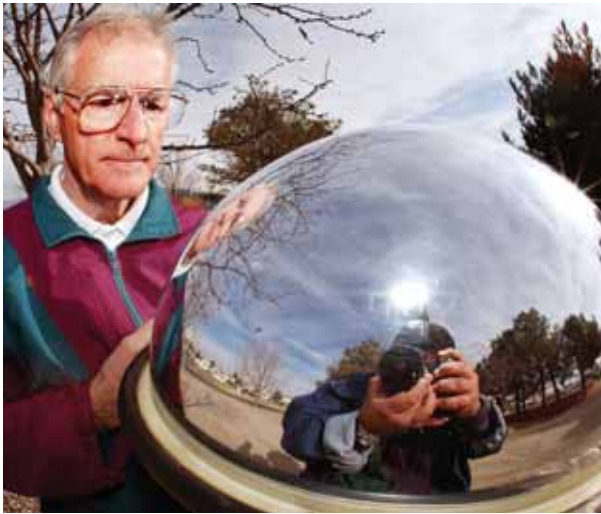


# Asteroids

(Continued from page 1)

The profusion of information also satisfied a desire by meteoriticists to know the orbits and locations of parent bodies that yield meteorites of various types, he says. Such knowledge could help future space missions explore or even mine the asteroids in Earth-crossing orbits.

The four-meter-diameter asteroid, called 2008 TC3, was initially sighted by the automated Catalina Sky Survey telescope at Mount Lemmon, Ariz., on Oct 6.



SANDIA SEER — Sandia's Dick Spalding holds the top of a sky telescope observation device. Visible in the reflective mirror is *Lab News* photographer Randy Montoya.

Numerous observatories, alerted to the invader, then imaged the object. Computations correctly predicted impact would occur in the Nubian Desert of northern Sudan 19 hours after discovery.

According to NASA's Near Earth Object program, "A spectacular fireball lit up the predawn sky above Northern Sudan on Oct. 7, 2008."

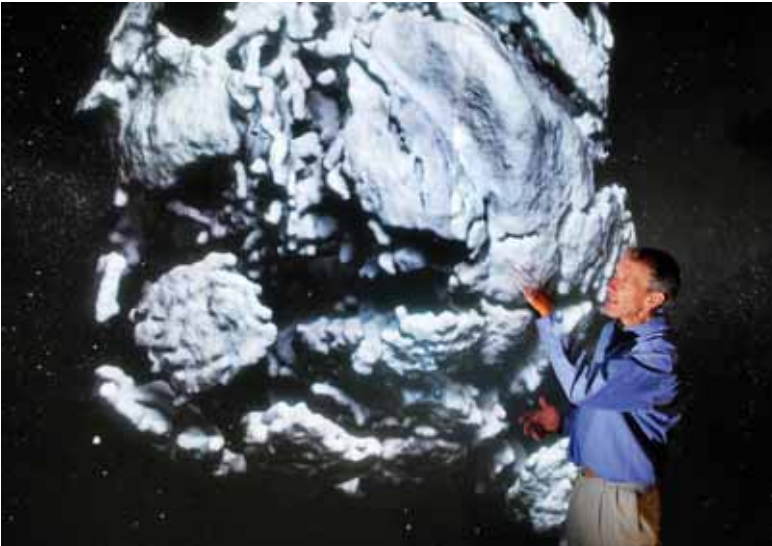
A wide variety of analyses were performed while the asteroid was en route and after its surviving pieces were located in an intense search by meteorite hunters.

Researchers listed in the paper describing this work in the cover article of the March 26 issue of the journal *Nature* come from the SETI Institute, the University of Khartoum, Juba University (Sudan), Sandia, Caltech, NASA Johnson Space Center and NASA Ames, and other universities in the US, Canada, Ireland, England, Czech Republic, and the Netherlands.

Dick Spalding (5710) interpreted data that recorded the atmospheric fireball, and Mark estimated the aerodynamic pressure and strength of the asteroid based on the estimated burst altitude of 36 kilometers.

Searchers have recovered 47 meteorites so far— offshoots from the disintegrating asteroid, mostly immolated by its encounter with atmospheric friction — with a total mass of 3.95 kilograms.

The analyzed material showed carbon-rich materials not yet represented in meteorite collections, indicating



DON'T LOOK BACK, IT MAY BE GAINING ON YOU. Sandia's Mark Boslough discusses aspects of asteroids. (Photo by Randy Montoya)

that fragile materials still unknown may account for some asteroid classes. Such meteorites are less likely to survive due to destruction upon entry and weathering once they land on Earth's surface.

"Chunks of iron and hard rock last longer and are easier to find than clumps of soft carbonaceous materials," says Mark.

"We knew that locating an incoming object while still in space could be done, but it had never actually been demonstrated until now," says Mark. "In this post-rational age where scientific explanations and computer models are often derided as 'only theories,' it is nice to have a demonstration like this."

# Facilities' cost-saving austerity initiative yields big results

By Jeff Young (10648)

An initiative launched by the Facilities organization to reduce costs stands to save the Labs some \$1.6 million over the next 10 years. The initiative, conducted as part of the Labs-wide cost austerity effort (*Lab News*, Jan. 30), involves a carefully structured schedule to reduce the vehicles and maintenance equipment it uses to perform its work.

Facilities Management and Operations Center 4800 (FMOC) provides a wide variety of services for Sandia, including custodial services, building maintenance, infrastructure and parking lot maintenance, and energy management. Due to the nature of this work, FMOC uses a large number of vehicles and equipment. Forklifts, carts, bucket trucks, and welders are all part of Facilities' fleet of equipment.

A large number of Facilities personnel worked on the cost-saving initiative, says Facilities and Operations Center 4800 Senior Manager Mike Quinlan. In identifying cost-saving areas, he says, the Facilities team followed some guiding principles he laid down:

- We are not reducing capabilities
- Capabilities trump costs
- Use least expensive vehicles to maintain capabilities
- Handle redundancies with rentals
- Facilities personnel will be involved in the evaluation process

Here's how the cost-saving initiative was implemented:

Facilities generated a list of vehicles and equipment it owned, along with detailed costs associated with each vehicle and piece of equipment. The list was distributed to all team supervisors in the Facilities maintenance departments. Supervisors used Mike's guiding principles to determine how they might reduce their vehicle and equipment needs. They achieved these reductions primarily by gaining an understanding of how the departments could consolidate resources.

Once the team supervisors identified the list of vehicles and equipment they could do without, Facilities calculated the financial savings associated with the vehicle and equipment reduction. The savings included eliminating the monthly leases associated with each of the vehicles, the maintenance and repair costs associated with the equipment, and the labor savings associated with managing the vehicles and equipment.

The end result of this initiative, says Mike, is an annual savings to FMOC and the Labs of around \$160,000. This translates to a five-year savings of \$800,000 and a 10-year savings of \$1,600,000. Facilities plans to sell much of the equipment at auction, Mike says, resulting in additional cost-savings to Sandia.

As this initiative comes to a close, Mike says, Facilities continues to review its processes and look for other opportunities to reduce their costs.

"There are two important leadership lessons for me in this exercise," he says. "First, when a line of sight is established giving the 'why' for an initiative like this, Sandians will step up and make a difference. Second, if a leadership commitment is made to solve the underlying problem the goal is always attainable. In this case the absence of a rental process had folks believing we needed to own equipment that was critical operationally but infrequently used. This initiative sends us further down the road to operational excellence. It's the kind of story one is happy to share with friends and neighbors."

Footnotes to chart at right:

1. The Labs-wide cost savings estimate is based on an illustrative number. The amount of savings could vary up or down depending on the actual number (e.g., physical move could consist of 1,000 employees instead of the 500 used in this analysis).
2. Dollars per person is based on a wide variety of sources throughout the Labs and research performed (e.g., Energy Management Website, PO Purchases Query, and various subject-matter experts).
3. Travel time assumes a two-night stay using per diem rates for food and lodging. Standard airfare for trip to Oakland, Calif.

## How can you make a difference?

So how much can the average Sandia employee save per year? Some assumptions have been made and you will be pleasantly surprised that you can do more than you think. See ideas and estimates below (see footnotes at lower left):

Action/idea	Per person cost savings (most are annual amounts)	Potential Labs cost savings (most are annual amounts)
Get rid of your pager (100 pagers)	\$72	\$7,200
Get rid of a second machine with Microsoft license (500 software licenses)	\$75	\$37,500
Get rid of your cell phone (100 cell phones)	\$480	\$48,000
Turn off computer every night (7,500 employees)	\$30	\$225,000
Turn off lights every time you leave the office (11,527 offices)	\$10.80	\$124,491
Turn off your copy machine every night (500 copiers)	\$40	\$20,000
Tele/Videoconference in lieu of one trip (1,000 employees)	\$1,100	\$1,100,000
Use reapplication for a new chair (500 employees)	\$400	\$200,000
Avoid a physical move (500 employees)	\$750	\$375,000
Reduce office supply purchases by \$50 (7,500 employees)	\$50	\$375,000
Move from Q clearance to L clearance (250 employees)	\$3,900	\$975,000
Use double-sided printing to reduce copy paper (assume 40 percent reduction)	\$31	\$213,000
Turn in a GSA vehicle (50 medium-size cars or small trucks)	\$4,932	\$246,600
Potential savings	\$11,870.80	\$3,946,791



# Taking a hard look at how we do security

## Security Performance Improvement Project team addresses concerns raised by DOE’s Office of Enforcement

By Bill Murphy

In May 2008, Sandia received a wake-up call from DOE’s Office of Enforcement (OE), one of the elements within DOE’s Office of Health, Safety, and Security.

The call came in the form of a letter addressed to Labs Director Tom Hunter. The letter expressed concerns about Sandia’s protection of classified information and questioned the effectiveness of Sandia’s processes to identify root causes of security-related incidents and to prevent recurrences.

Brian Bielecki, director of Safeguards and Security Center 4200 at the time of the OE notification (and currently serving as director of ES&H and Emergency Management Center 4100), says the 2008 review by the Office of Enforcement provided Sandia an opportunity “to look broadly at how we do security at the Laboratories and specifically at issues related to the protection of classified information in both the paper and cyber realms.”

Security, says Brian, “is an element of mission success; we can’t separate it out and treat it as a distinct issue. It’s central for the mission we do.”

To address security from a systems point of view, Brian established the Security Performance Improvement Project (SPIP) team.

The team has devoted time to the immediate issues cited by the OE.

“One of our challenges has been to look at the incidents [cited by the Office of Enforcement] and try to get to root causes,” says team member Pat Smith, director of California Site Operations Center 8500. “We don’t want to just fix specific problems; we want to understand how changes in our approach to security can be sustained. Are we, in other words, getting to the heart of the matter?”

In any human system, says Brian, error can creep in. Any security system must take that into account.

Root cause analyses of security incidents almost always find an element of human error, and that, says Brian, is something that can be addressed.

### A graded approach

“There are a number of things you can look at,” Brian says. “For example, we need to take a graded approach to relative risks. If there is no meaningful risk, eliminate the requirement. If the risk is real, we need to consider both human- and technology-based backup methodologies.”

The team has also focused on actions Sandia might take to become the model for other national laborato-

ries trying to adapt to 21st-century security challenges.

Sandia Chief Information Officer and team member Art Hale talks about how technology advances in recent years have dramatically compounded the challenge for security professionals.

“There are a lot of security dilemmas” in the cyber world, observes Art. “How do you keep cyber systems secure in a world of small, portable data recorders, videoconferencing, USB drives? It’s something we have to deal with. We want to enable the workforce, but how do we do that while maintaining high security? These are challenges.

“We need to find ways,” he says, “to integrate modern technologies, which can be extremely powerful tools for creativity, collaboration, and productivity, into an environment where security is essential.”

Team member Dori Ellis, director of DSA Operations, Plans, and Strategy Center 5200, agrees. “The [security] standards we hold ourselves to are increasing at the same time technology is introducing changes in the way we do our work,” Dori says. “That’s a challenge. Regarding technological change, we need to thoroughly analyze the issue to determine whether the risks [to security] posed by new technologies are perhaps not so high after all, or, on the other hand, do we need to improve the technology to where we bring risk to an acceptable level?”

### Natural tensions, pragmatic concerns

There is a “natural tension,” Brian agrees, between high security and high technology, a tension that has implications — among other things — for the Labs’ recruiting efforts.

“If we want to attract a world-class workforce — and we do — we need to recognize that potential employees have some expectations about how they do their work,” says Brian. “How do we attract and retain that workforce when we ask them to come into an environment where they may not be able to use some of their preferred tools? As Art says, it’s a challenge.”

And, adds Dori, there’s a simple, pragmatic concern, too. “We deal constantly with the question of what we can really afford. There’s a constant tension around cost.”

Cost and technology-related issues aren’t the only sources of tension. There is tension, too, around collaboration with the international science community within a national security environment.

“By definition, ‘world-class’ goes beyond people who are born in the US or are US citizens,” says Art. “How do we more effectively integrate non-US citizens into

our workforce?”

Adds Pat: “The feedback we get is that it’s extremely challenging for our international partners to work in our environment. We really need to work harder on this issue.”

### Sandia can be a leader

Team members say that every laboratory in DOE is grappling with these challenges, and they believe Sandia can be a leader in addressing many of them.

In tackling the concerns raised by the Office of Enforcement, the SPIP team has come up with specific suggestions for consideration: Implementing end-of-day two-person checks on classified repositories and safes; two-person checks on the disposition of equipment; a broader deployment of BlackBerrys (where appropriate), based on having more robust, built-in security features; possible deployment of more diskless workstations, again, where appropriate; fostering heightened awareness of what constitutes classified information; applying engineered IT solutions to heighten awareness and provide expanded encryption capabilities; and providing better, more directed, program-specific training about classification issues.

Before being implemented Labs-wide, any planned changes will be communicated through the divisions’ security liaisons and some will be part of a pilot, says Brian. “We intend to go through this process methodically, yet with an appropriate sense of urgency,” he says. “In other words, we intend to be deliberately aggressive in our approach.”

“Above all, we must embrace a value system around security,” Dori says. “Thirty years ago, at the height of the Cold War, security consciousness was very high; over time we’ve lost some of that focus. For many of our customers, the ability to protect information is a key part of how they grade our homework, so to speak. Any sense that we don’t take security as seriously as we should is a big deficit.”

Clearly, the SPIP team has its hands full. “Accountability demands that we implement short-term actions to improve security performance,” says Brian. “Longer term, we need to understand how to make strategic changes. We want to attract and retain customers, attract and retain employees, and do so in an environment where security is understood to be an integral part of our mission success. No one [among the DOE laboratories] has effectively captured that market yet. We want to distinguish ourselves as the benchmark; doing so will require the collective efforts of all employees.”

# Every minute counts

## Quickly reporting a controlled article incident could avert a security infraction

By Darrick Hurst (4232)

For years now, members of Sandia’s workforce who have brought cell phones, MP3 players, Bluetooth devices, or any other unauthorized electronic device into a limited area could look forward to one thing: a security infraction. However, as of October 2008, people who meet the criteria of a new National NNSA/Sandia Site Office-approved controlled article variance are receiving a more merciful judgment.

The new variance, which waives the automatic security infraction policy for controlled article incidents, was granted to the Security Incident Management Program (SIMP) office in an effort to correct the level of resources that had been disproportionately dedicated to the small risk posed by these devices. Since Sandia’s existing corporate policy prohibits controlled articles from entering into a limited area, these articles are not likely to be targeted as a means for collecting information.

### Consideration made for honest mistakes

The variance serves to benefit individuals, who can now avoid being issued a security infraction for a “one-time honest mistake,” and Sandia as a whole by preventing increases in the reportable security incident rate, allowing Security to focus resources on events that are more risk-significant. The responsibility for identifying corrective actions to prevent recurrences is assigned to individuals and their managers.

Under the new variance, incidents involving controlled articles will not result in a security infraction if they are self-reported to SIMP within three hours, if the individual holds a security clearance, if no compromise of classified matter has occurred, and if the individual is not involved in another incident within a 12-month period. Impacting DOE’s decision to grant the new variance was Sandia’s exemplary history of voluntarily self-reporting such incidents, truthfully doing so, and the relatively low number of people who were repeat offenders.

### Controlled articles

The term “controlled article” refers to items such as cell phones, cameras, Bluetooth devices, MP3 players, devices with USB ports, or any that have recording capabilities, which are restricted on Sandia-controlled premises. Some less obvious examples of items that are controlled are digital photo frames and key chains, devices that use RF technology (such as wireless keyboards), and walkie-talkies.

### Three-hour ticking clock

“If someone discovers they’ve brought a controlled device into a limited area, the very first thing they should do is report it to SIMP immediately,” Donnie Greene (4229) says. “If he or she communicates it to us within three hours, the incident then becomes eligible for a variance.”

Donnie explains that in a growing number of recent cases, members of the workforce found themselves inside limited areas with controlled articles, but waited hours, or even days, to report the incidents. As a result of the delay, these people became ineligible for the variance, and in some instances, actually exacerbated the potential for security compromise by taking the controlled articles through multiple limited areas.

“Mistakes do happen,” Earl Conway (4229) says. “What we want the workforce to remember is that they should report any type of security concern as soon as they can.”

All security incidents should be immediately reported to SIMP using the OOPS process (311 from a Sandia phone, or 505-844-0311 from an outside line in New Mexico, or 925 294-3230 in California) or the SIMP pager (505-540-2382 in New Mexico or 1-888-932-9710 in California).

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More information regarding controlled articles can be found in CPR400.2.10, Using Information Technology (IT) Resources, Section 4.8.

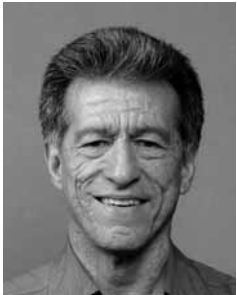


# Mileposts

New Mexico photos  
by Michelle Fleming



Steve Babcock  
35 5444

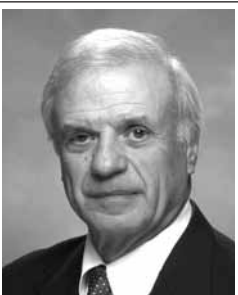


Alonzo Lopez  
35 5419



William Davidson  
30 5764

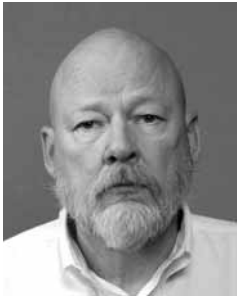
## Recent Retiree



Jim Tegnella  
21 12190



Mike Hightower  
30 6332



Michael Senglaub  
30 5432



Arlo Ames  
25 6322



G. Ronald Anderson  
25 1717



Glenn Barker  
25 5527



Billy Carlen  
25 2625



Ray Dukart  
25 5417



Scott Gillespie  
25 421



Randy Williams  
25 1732



Robert Koss  
20 2110



Doretta Liyai  
20 12820



Kathy Congable  
15 12420



Rose Gehrke  
15 10617



Norma Goodwin  
15 4024



Lois Lauer  
15 5528



Analisa Martinez  
15 5402



Molly Minana  
15 6325



Deborah Payne  
15 10012



Sandy Pino  
15 2719



Darren Talley  
15 1381



# School to World



Some 20 Sandians participated in the 10th annual School to World event April 14 at the Albuquerque Convention Center. The event offers 8th and 9th grade students insight into the world of careers. Albuquerque businesses, local government agencies, and educational organizations came together to present information to students about future education and career choices.

### 2009 statistics:

- 1,737 Students attended
- 349 Parents, chaperones, teachers, siblings
- 540 Presenters representing more than 150 occupations

### Schools represented (97 total):

- 30 Albuquerque Public Schools
- 44 Public schools outside of Albuquerque
- 23 Private, charter, and home schools

(Photos courtesy of Anita Romero)





# Dragons and damsels

**Gary Froehlich shares the beauty of Bosque del Apache at a New Mexico Tech photography exhibit**

**Story by Stephanie Holinka • Photos by Gary Froehlich**

Sometimes art inspires science, but Gary Froehlich's (5345) work in the science of optics inspired him to learn more about the art of photography. But Gary's training in optics came before his interest in photography. "After my training," Gary says, "I figured that maybe I should have a camera."

Gary combined his technical skill with patience and his love of nature to photograph all types of wildlife, sometimes remaining near-motionless for hours at a time to get that perfect shot.

"Dragons and Damsels of the Bosque del Apache National Wildlife Refuge," an exhibit at New Mexico Tech's Macey Center, showcases more than 40 of Gary's dragonfly and damselfly prints taken over many years of visits to the Bosque del Apache Wildlife Refuge.

He attributes his love of nature to his grandmother, who led Girl Scouts on wildflower walks and nature hikes when he was young. "She was a Scout leader for more than 65 years," Gary says, "which is still, I believe, a record."

His grandmother allowed him to join her scouts on their nature adventures, allowing him to earn many of the nature-oriented merit badges for both Girl Scouts and Boy Scouts along the way.

Gary's photos appear in many books including *The Stokes Field Guide to Birds*, as well as some of the Stokes Beginner's Guides. His photos will also appear in UNM Press' upcoming "Raptors of New Mexico."

Some people may recognize Gary as the cover model for the 2008 edition of *Labs Accomplishments*, where he stood inside an anechoic chamber at the Facility for Antenna and RCS Measurements (FARM), a resource used by the synthetic aperture radar groups.

Gary's field-test work at this and other ranges frequently takes place at night, leaving him with plenty of daylight to seek out all types of wildlife with his lenses. During his down-time during such field work, he's identified and documented the birds, reptiles, and insects at each of the facilities where he has spent many long days and nights.

Initially, Gary was interested in photographing birds, but he expanded his repertoire to the smaller world of insects. As a frequent visitor to Bosque del Apache, Gary has led many workshops about the birds, insects, and reptiles that inhabit the sanctuary. He finds that the best way to learn something new

about the animals in the Bosque is to volunteer to teach a workshop.

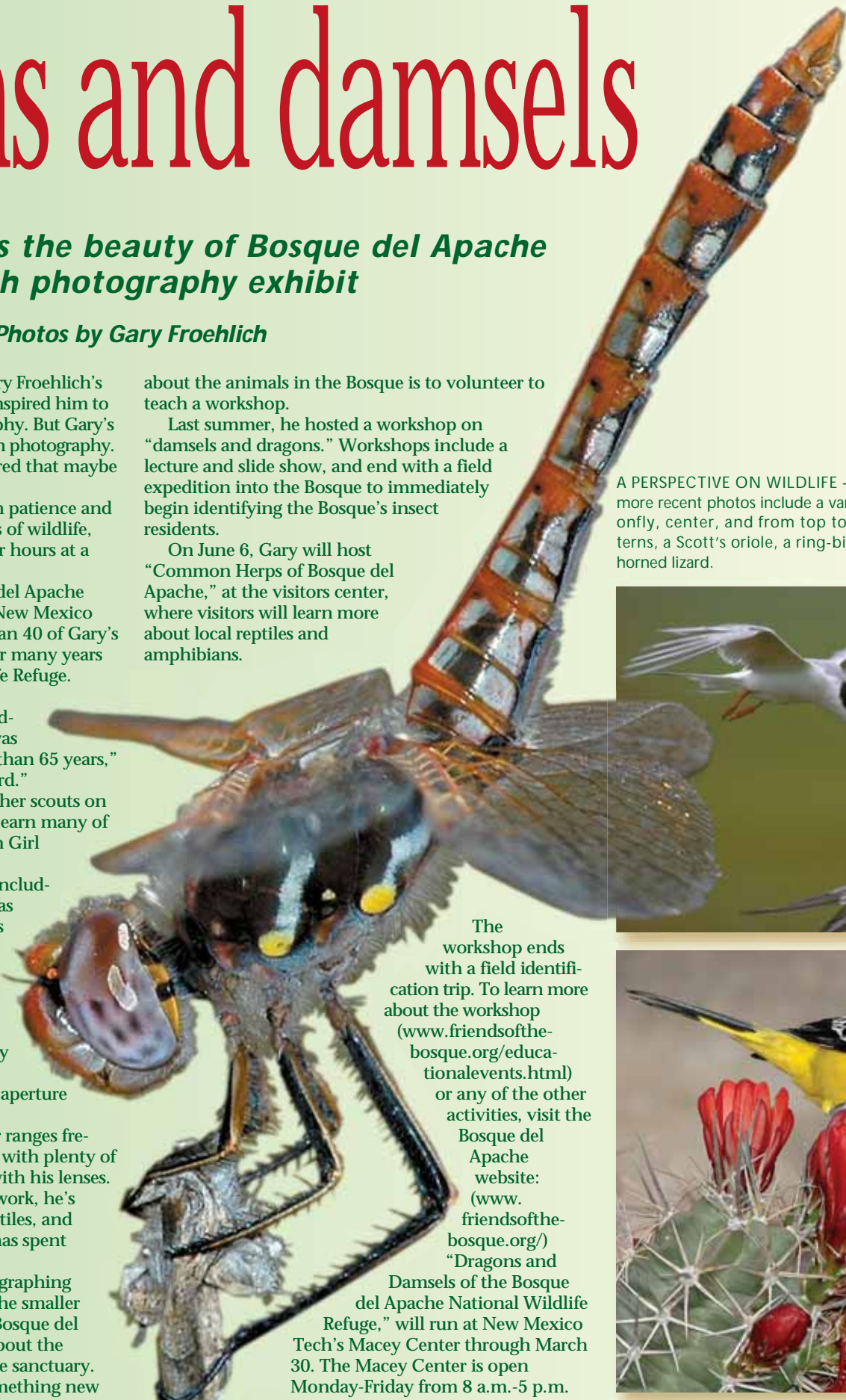
Last summer, he hosted a workshop on "damsels and dragons." Workshops include a lecture and slide show, and end with a field expedition into the Bosque to immediately begin identifying the Bosque's insect residents.

On June 6, Gary will host "Common Herps of Bosque del Apache," at the visitors center, where visitors will learn more about local reptiles and amphibians.

The workshop ends with a field identification trip. To learn more about the workshop ([www.friendsofthe-bosque.org/educationalevents.html](http://www.friendsofthe-bosque.org/educationalevents.html)) or any of the other activities, visit the Bosque del Apache website: ([www.friendsofthe-bosque.org/](http://www.friendsofthe-bosque.org/)) "Dragons and

Damsels of the Bosque del Apache National Wildlife Refuge," will run at New Mexico Tech's Macey Center through March 30. The Macey Center is open Monday-Friday from 8 a.m.-5 p.m.

A PERSPECTIVE ON WILDLIFE — Some of Gary Froehlich's more recent photos include a variegated meadowhawk dragonfly, center, and from top to bottom, a pair of Forster's terns, a Scott's oriole, a ring-billed gull, and a round-tailed horned lizard.



GARY FROEHLICH patiently waiting with his camera for the perfect shot.

(Photo by Randy Montoya)